

CLAIMS:

1. A DNA segment coding for a polypeptide comprising an amino acid sequence corresponding to autotaxin, or a fragment thereof having at least 5 amino acids.

2. The DNA segment according to claim 1, wherein said DNA segment encodes the amino acid sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO:11, SEQ ID NO:26 through SEQ ID NO:34, SEQ ID NO:36, and SEQ ID NO:38 through SEQ ID NO:52.

3. An isolated polypeptide comprising an amino acid sequence corresponding to autotaxin, or a fragment thereof having at least 5 amino acids.

4. The polypeptide according to claim 3, wherein said amino acid sequence comprises the amino acid sequence selected from the group consisting of SEQ ID NO:1 through SEQ ID NO:11, SEQ ID NO:26 through SEQ ID NO:34, SEQ ID NO:36, and SEQ ID NO:38 through SEQ ID NO:52.

5. An isolated polypeptide bound to a solid support, comprising an amino acid sequence corresponding to autotaxin, or a fragment thereof having at least 5 amino acids.

6. The polypeptide according to claim 5, wherein said polypeptide comprises the amino acid sequence selected from the group consisting of the SEQ ID NO:1 through SEQ ID NO:11, SEQ ID NO:26 through SEQ ID NO:34, SEQ ID NO: 36 and SEQ ID NO:38 through SEQ ID NO:52.

7. A recombinant DNA molecule comprising a

vector and the DNA segment according to claim 1.

8. A cell that contains the recombinant DNA molecule according to claim 7.

9. An antibody having binding affinity for autotaxin, or binding fragment thereof.

10. A method of producing a recombinant autotaxin polypeptide said method comprising:
culturing a cell containing the recombinant DNA molecule of claim 7 under conditions such that the DNA segment is expressed, producing said polypeptide; and
isolating said polypeptide.

11. A method of purifying the autotaxin peptide of claim 3, comprising the steps of:

i) collecting and concentrating supernatant from cultured A2058 human melanoma cells whereby a first preparation of said peptide is produced;
ii) salt fractionating said first preparation to produce a second peptide preparation;
iii) isolating said peptide from said second preparation so that said peptide is obtained in substantially pure form.

12. The method of claim 11, wherein said isolating step is effected by column chromatography.

13. An isolated DNA encoding an autotaxin protein or fragment thereof wherein said DNA includes a nucleic acid sequence selected from the group consisting of SEQ ID NO:35, SEQ ID NO:37 and SEQ ID NO:38.

14. The DNA segment according to claim 1,

wherein said DNA fragment comprises any one of the SEQ ID NO:12 through SEQ ID NO:25, or SEQ ID NO:39 through SEQ ID NO:52.

15. The DNA segment according to claim 13 wherein said DNA segment comprises any one of the SEQ ID NO:12 through SEQ ID NO:25.

16. An isolated polypeptide comprising an amino acid sequence corresponding to autotaxin.

17. A polypeptide bound to a solid support and comprising an amino acid sequence corresponding to autotaxin.

18. A recombinant autotaxin polypeptide according to claim 3.

19. An isolated polypeptide according to claim 3 having cell motility activity.